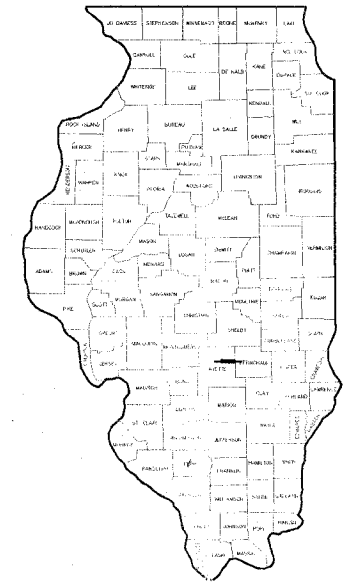


STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED BRIDGE REPLACEMENT AND REHABILITATION PROGRAM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 299	05-01122-00-BR	FAYETTE	11	1
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

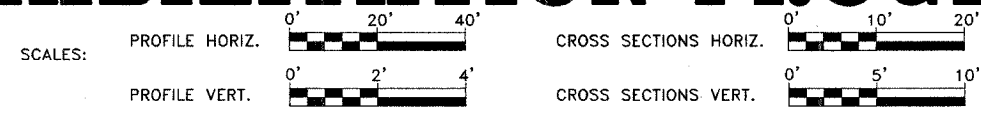
CONTRACT NO. 95465



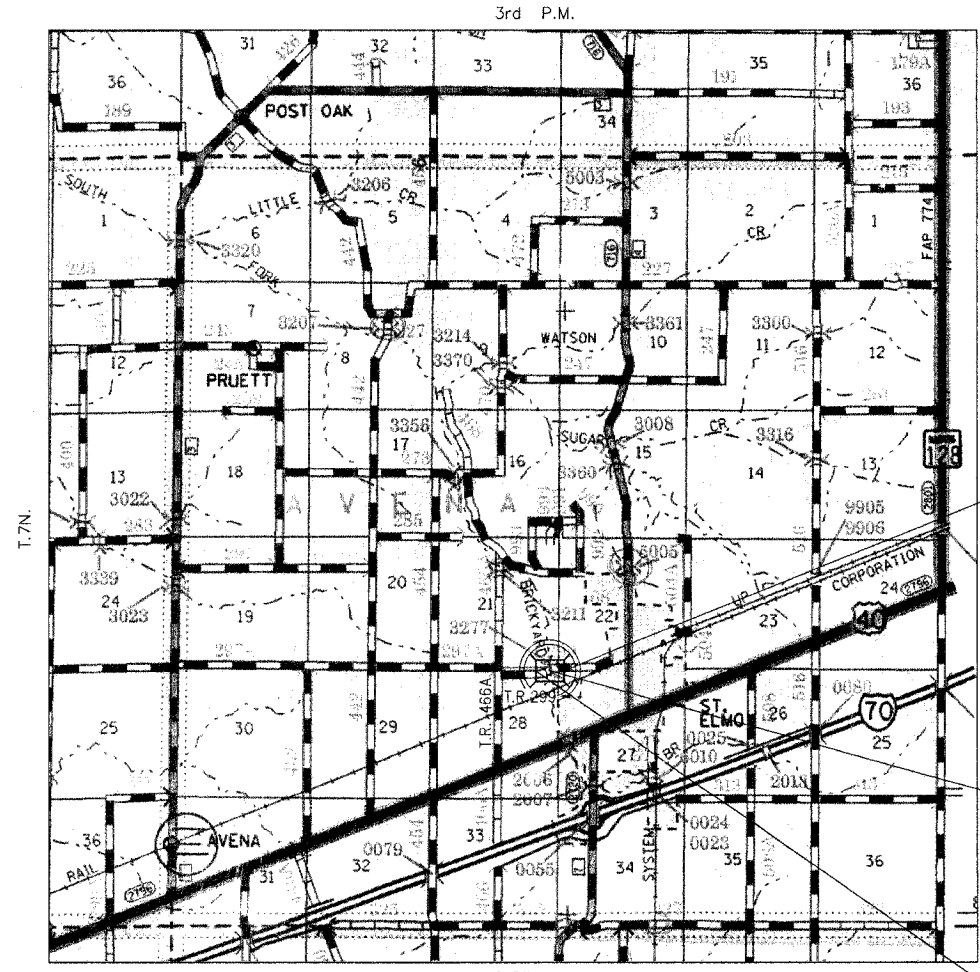
LOCATION OF PROJECT INDICATED THUS - - - - -

INDEX OF SHEETS

1	COVER SHEET
2	TYPICAL CROSS SECTION, GENERAL NOTES, AND SUMMARY OF QUANTITIES
3	PLAN AND PROFILE SHEET
4-10	BRIDGE PLANS
11	CROSS SECTIONS
STANDARD 000001-04 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS	
STANDARD 280001-02 TEMPORARY EROSION CONTROL SYSTEMS	
STANDARD 702001-06 TRAFFIC CONTROL DEVICES	
STANDARD B.L.R. 21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS	



SECTION 05-01122-00-BR PROJECT NO. BROS-051(72) AVENA ROAD DISTRICT FAYETTE COUNTY JOB NO. C-97-057-06



END SECTION 05-01122-00-BR
STA. 50+45.94

STA. 50+00 - CONSTRUCT SINGLE SPAN PRECAST
PRESTRESSED CONCRETE DECK BEAM BRIDGE
(71.89' BK. TO BK. ABUTMENTS) WITH
SPILL-THRU PILE BENT ABUTMENTS
30' SKEW, 24' ROADWAY
EXISTING STRUCTURE NO. 026-3277
PROPOSED STRUCTURE NO. 026-3427

BEGIN SECTION 05-01122-00-BR
STA. 49+54.05

LOCATION MAP

APPROXIMATE SCALE - 1" = 0.69 MILE
NET LENGTH OF IMPROVEMENTS - 91.89 FEET = 0.017 MILE

48 HOURS PRIOR TO EXCAVATION CALL J.U.L.I.E.: 1-800-892-0123

CLASS ROAD: RURAL LOCAL ROAD
A.D.T. = 350
40 M.P.H.

APPROVED 1-26, 2006
Michael A. Mat...
COUNTY ENGINEER

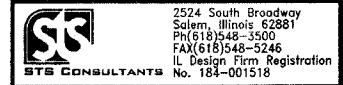
PASSED 3-8, 2006
Maureen J. Co...
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS & STREETS

Releasing For
Bid Based on
Limited Review 3-8, 2006
Christina R. R...
DEPUTY DIRECTOR OF HIGHWAYS,
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

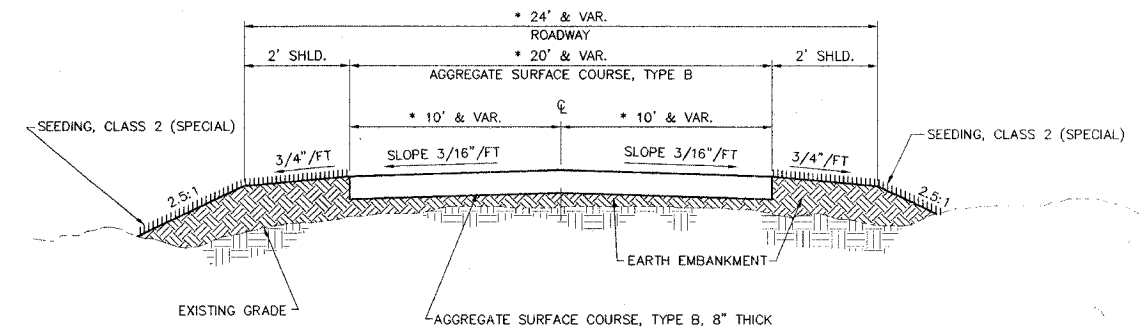


1/24/06
LIC EXP 11/30/07



STS JOB NO. 30387

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 299	05-01122-00-BR	FAYETTE	11	2
FED. ROAD DIST. NO.	ILLINOIS	PROJECT	CONTRACT NO. 95465	



TYPICAL CROSS-SECTION

- * 24' & VAR. ROADWAY
- * 20' & VAR. AGGREGATE SURFACE COURSE, TYPE B
- * 10' & VAR. SLOPE 3/16\"/>
- * 10' & VAR. SLOPE 3/16\"/>
- * 2' SHLD.
- * 2' SHLD.
- * SEEDING, CLASS 2 (SPECIAL)
- * SEEDING, CLASS 2 (SPECIAL)
- * 3/4\"/>
- * 3/4\"/>
- * 2.5:1
- * 2.5:1
- * EARTH EMBANKMENT
- * AGGREGATE SURFACE COURSE, TYPE B, 8\"/>
- * EXISTING GRADE

GENERAL NOTES

1. THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE SPECIAL PROVISIONS AND THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2002.
2. IF SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
3. ALL EXISTING SIGNS AND SIGN POSTS SHALL BE SALVAGED TO THE COUNTY.
4. THE SHRINKAGE FACTOR FOR EMBANKMENT IS 25%.
5. ALL CLEARING AND GRUBBING IS TO BE INCLUDED IN THE UNIT PRICE BID FOR EARTH EXCAVATION.
6. BITUMINOUS SURFACE TREATMENT (A-2) WILL BE COMPLETED BY THE OWNER.

SUMMARY OF QUANTITIES

X031-2A

CODE NO.	ITEM	QUANTITY	UNIT
20200100	EARTH EXCAVATION	33	CU. YD.
20300100	CHANNEL EXCAVATION	500	CU. YD.
25001000	SEEDING, CLASS 2 (SPECIAL)	0.03	ACRE
28100807	STONE DUMPED RIPRAP, CLASS A4	136	TON
40200800	AGGREGATE SURFACE COURSE, TYPE B	110	TON
50100100	REMOVAL OF EXISTING STRUCTURES	1	EACH
50300225	CONCRETE STRUCTURES	22.6	CU. YD.
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	1680	SQ. FT.
50800105	REINFORCEMENT BARS	2680	POUND
50900205	STEEL RAILING, TYPE S1	140	FOOT
51201600	FURNISHING STEEL PILES HP 12x53	172	FOOT
51202700	DRIVING STEEL PILES	172	FOOT
51203600	TEST PILE STEEL HP 12x53	1	EACH
51204315	CONCRETE ENCASEMENT	3.36	CU. YD.
51500100	NAME PLATES	1	EACH
67100100	MOBILIZATION	1	L. SUM

STS CONSULTANTS
 2524 South Broadway
 Salem, Illinois 62881
 Ph(618)548-3500
 Fax(618)548-5246
 IL Design Firm Reg. No. 184-001518

**TR 299 SECTION 05-01122-00-BR
 AVENA ROAD DISTRICT
 FAYETTE COUNTY, ILLINOIS**

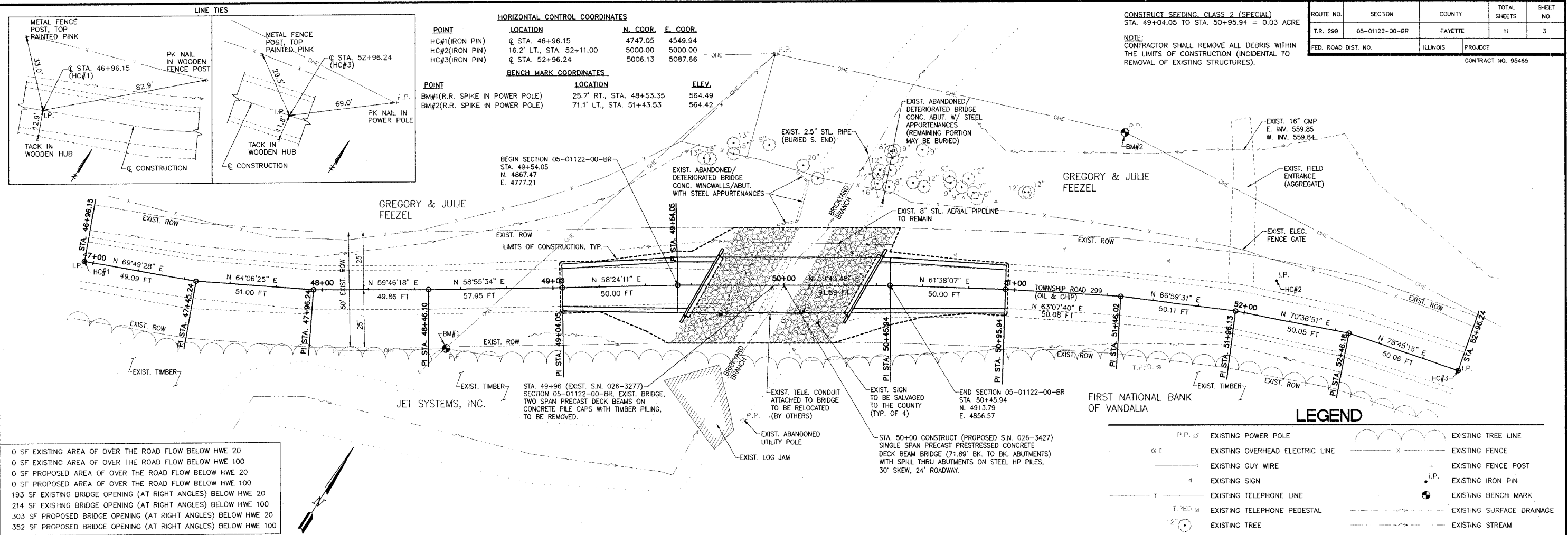
**TYPICAL CROSS SECTION,
 GENERAL NOTES AND
 SUMMARY OF QUANTITIES**

SURVEY	JAS	CHECKED	DATE
DESIGN	MRO	APPROVED	01/24/06
DRAWN	BLT		REVISED
			JOB NO. 30387

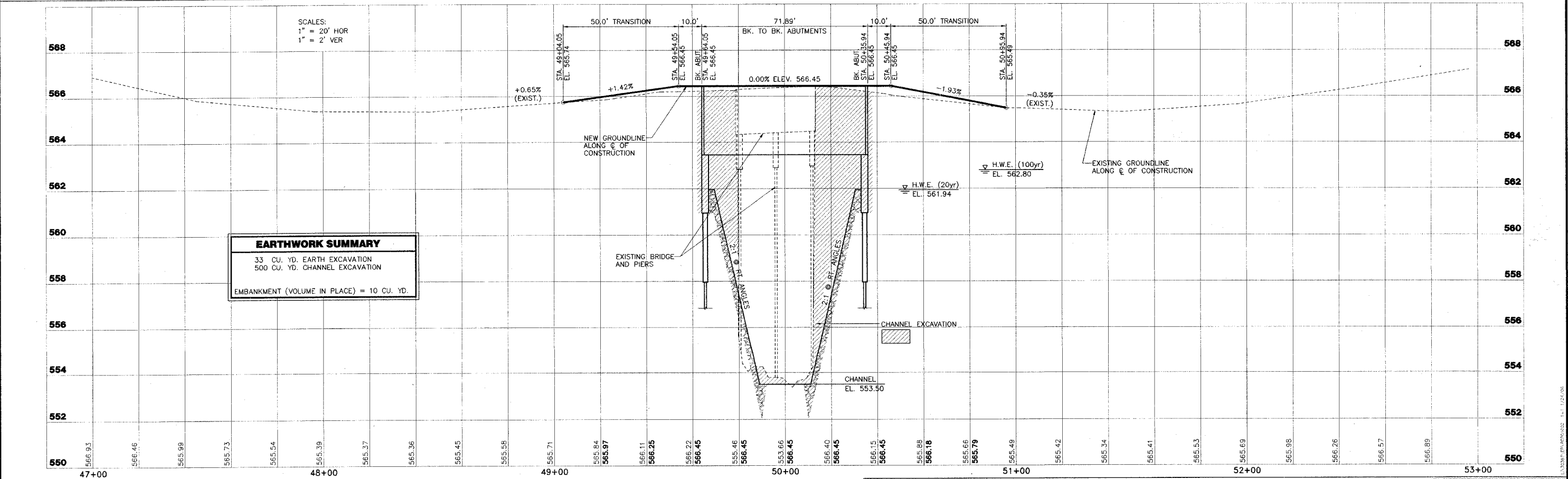
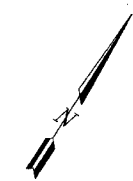
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 299	05-01122-00-BR	FAYETTE	11	3
FED. ROAD DIST. NO.	ILLINOIS	PROJECT	CONTRACT NO. 95465	

CONSTRUCT SEEDING, CLASS 2 (SPECIAL)
 STA. 49+04.05 TO STA. 50+95.94 = 0.03 ACRE

NOTE:
 CONTRACTOR SHALL REMOVE ALL DEBRIS WITHIN THE LIMITS OF CONSTRUCTION (INCIDENTAL TO REMOVAL OF EXISTING STRUCTURES).



- 0 SF EXISTING AREA OF OVER THE ROAD FLOW BELOW HWE 20
- 0 SF EXISTING AREA OF OVER THE ROAD FLOW BELOW HWE 100
- 0 SF PROPOSED AREA OF OVER THE ROAD FLOW BELOW HWE 20
- 0 SF PROPOSED AREA OF OVER THE ROAD FLOW BELOW HWE 100
- 193 SF EXISTING BRIDGE OPENING (AT RIGHT ANGLES) BELOW HWE 20
- 214 SF EXISTING BRIDGE OPENING (AT RIGHT ANGLES) BELOW HWE 100
- 303 SF PROPOSED BRIDGE OPENING (AT RIGHT ANGLES) BELOW HWE 20
- 352 SF PROPOSED BRIDGE OPENING (AT RIGHT ANGLES) BELOW HWE 100



EARTHWORK SUMMARY	
33 CU. YD. EARTH EXCAVATION	
500 CU. YD. CHANNEL EXCAVATION	
EMBANKMENT (VOLUME IN PLACE) = 10 CU. YD.	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 299	05-01122-00-BR	FAYETTE	11	4
FED. ROAD DIST. NO.		ILLINOIS		

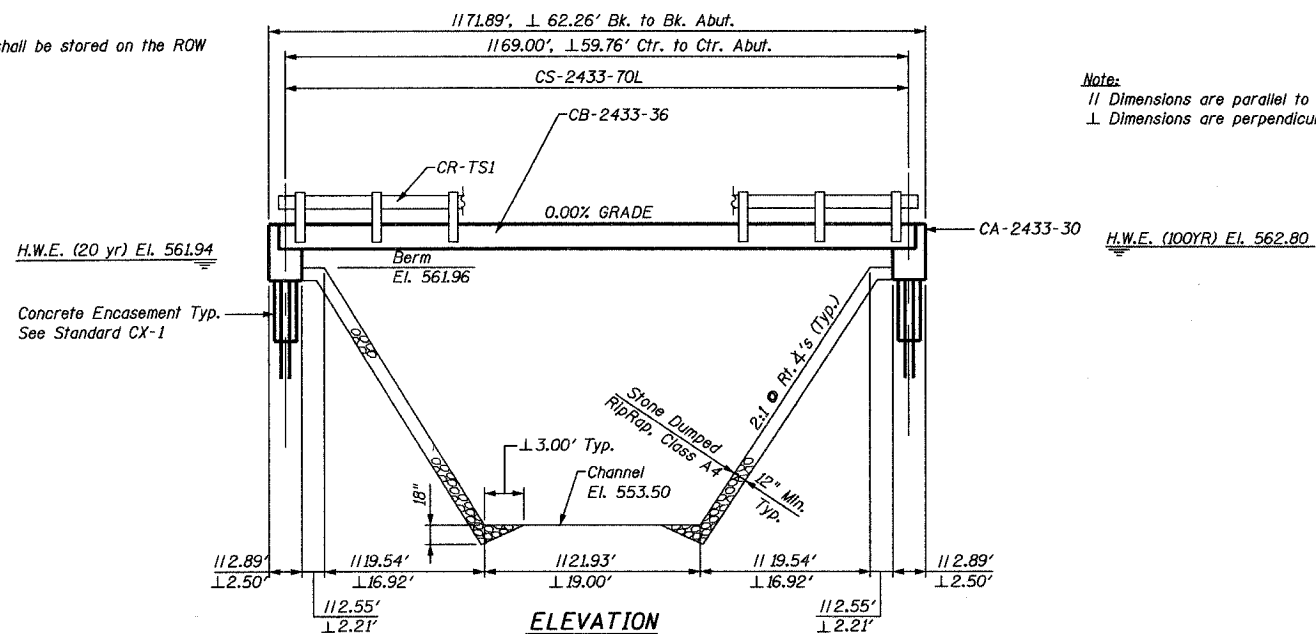
CONTRACT NO. 95465

B.M. - B.M. #1, R.R. Spike in Power Pole, 25.7' RT., STA. 48+53.35, EL. 564.49
B.M. #2, R.R. Spike in Power Pole, 71.1' LT., STA. 51+43.53, EL. 564.42

Existing Structure - Two span precast concrete channel beam superstructure on concrete pile caps, supported by timber piling.

Salvage - Material deemed salvageable by the Engineer shall be stored on the ROW for removal by the County.

Existing Known Utilities - Overhead electric, Telephone



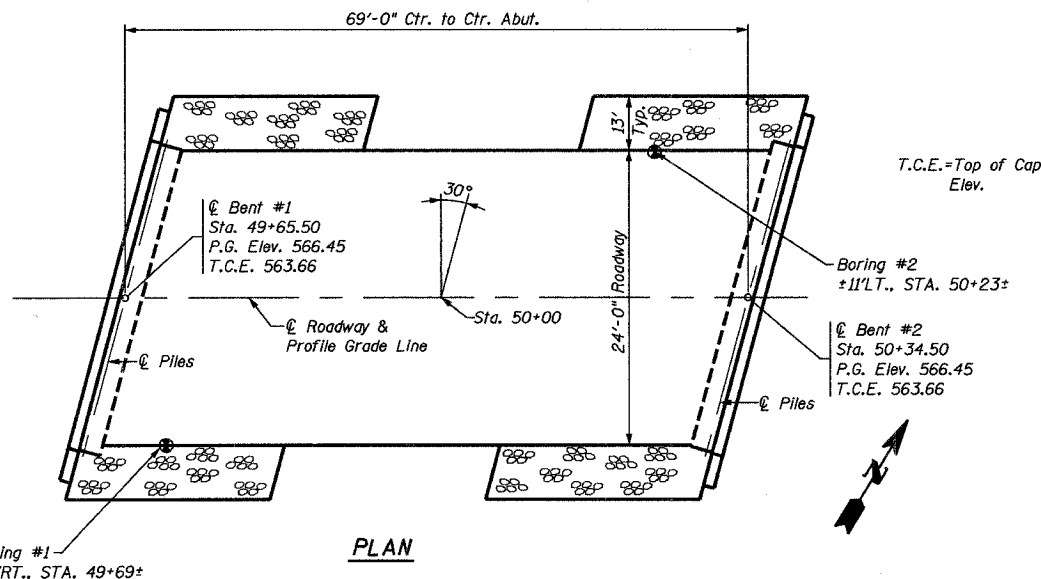
Note:
|| Dimensions are parallel to roadway
⊥ Dimensions are perpendicular to channel

GENERAL NOTES

- The contractor shall drive 1 test pile, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
- See Special Provisions for boring logs.
- A Calcium Nitrite Corrosion inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
- The Waterproofing Membrane System and Bituminous Concrete Surface Course Shown on the Standards Shall Not be Provided.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Removal of Existing Structures	Each				1
Concrete Structures	Cu. Yd.			22.6	22.6
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1680			1680
Steel Railing, Type S-1	Foot	140			140
Reinforcement Bars	Pound			2680	2680
Furnishing Steel Piles HP 12x53	Foot			172	172
Driving Steel Piles	Foot			172	172
Test Pile Steel HP 12x53	Each			1	1
Name Plates	Each			1	1
Concrete Encasement	Cu. Yd.			3.36	3.36



T.C.E. = Top of Cap Elev.

The standard detail sheets for this structure were assembled by me or persons under my direct supervision.

Date of License Expiration: 11/30/07

Date: 1/24/06

Signature: Michael R. Quantz



I certify these Standard Bridge Plans for foundation treatment only.

Date of License Expiration: 11-30-06

Date: 1-24-06

Signature: William D. Lucking



DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th ed.

LOADING HS 20-44

Allow 25# / Sq. Ft. for Future Wearing Surface.

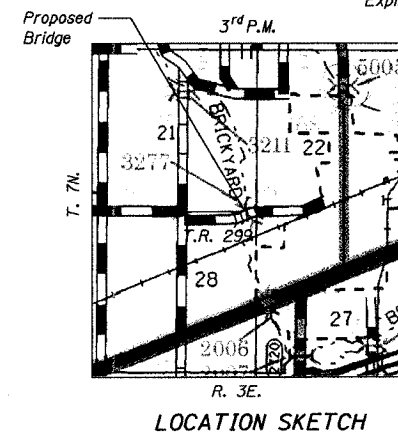
PILE DATA (2-ABUTS.)

Type: Steel Piles, HP12x53
Capacity: 60 Tons (Includes 150% of Max. Pile Load for H-Pile In Friction)
Estimated Length: 16 Feet Bent #1, 23 Feet Bent #2
Number Required: 10 (Includes 1 Test Pile located in Bent #2)

LETTERING FOR NAME PLATE

Locate Name Plate at Northwest Corner of Bridge (See Std. CN)

STATION 50+00
BRICKYARD BRANCH
SEC. 05-01122-00-BR BUILT 20-
PROJECT NO. BROS-051(72)
FAYETTE COUNTY
LOADING HS20
STR. NO. 026-3427



WATERWAY INFORMATION

Drainage Area = 8.58 Sq. Mi.		Low Grade Elev. 565.32 @ Sta. 48+46							
Flood Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E. Ft.	Head - Ft.		Headwater Elev. - Ft.		
		Exist.	Prop.		Exist.	Prop.			
Design	20	1680	193	303	561.94	N/A	0.40	N/A	562.34
Base	100	2473	214	352	562.80	N/A	0.84	N/A	563.64
Overtopping Max. Calc.	500								

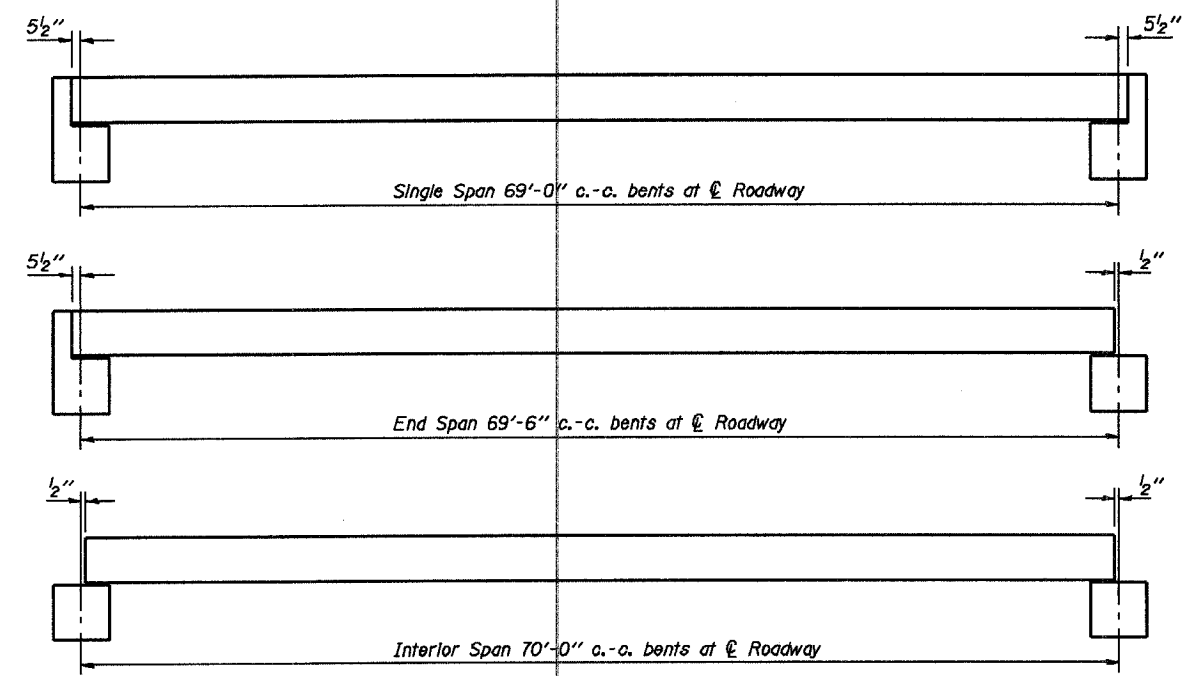
INDEX OF SHEETS

- General Plan & Elevation
- Standard CS-2433-70L
- Standard CB-2433-36
- Standard CA-2433-30
- Standard CR-TS1
- Standard CN
- Standard CX-1

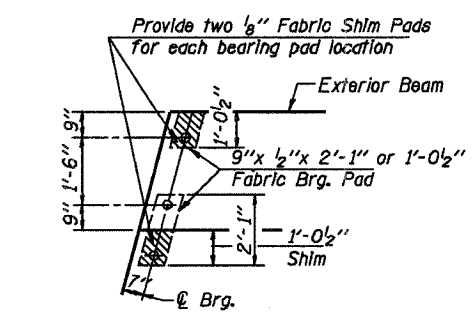
GENERAL PLAN & ELEVATION

T.R. 299
OVER BRICKYARD BRANCH
SECTION 05-01122-00-BR
FAYETTE COUNTY
STATION 50+00

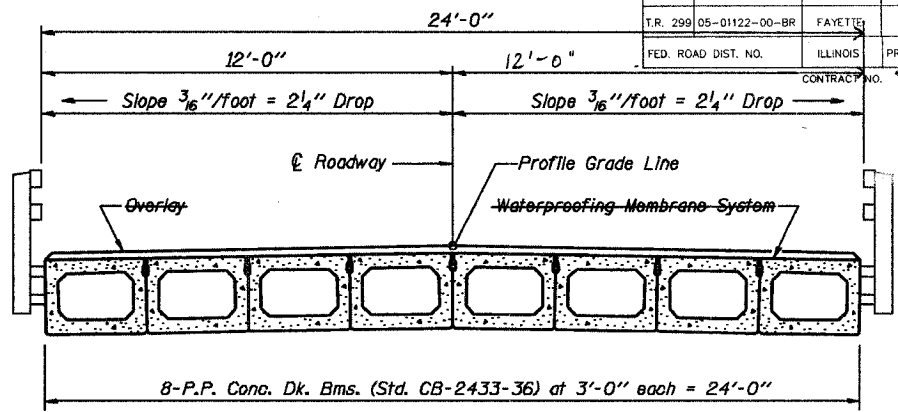
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 299	05-01122-00-BR	FAYETTE	11	5
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
		CONTRACT NO. 95465		



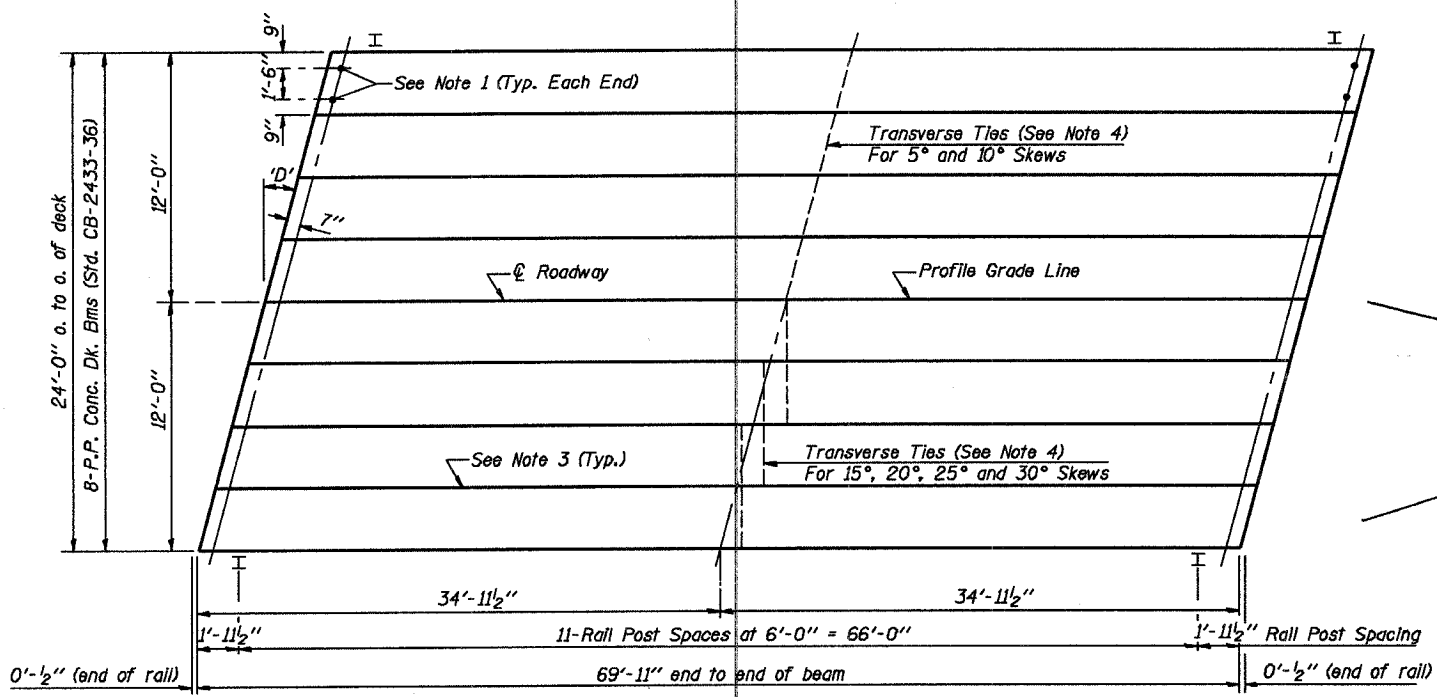
TYPICAL ELEVATIONS



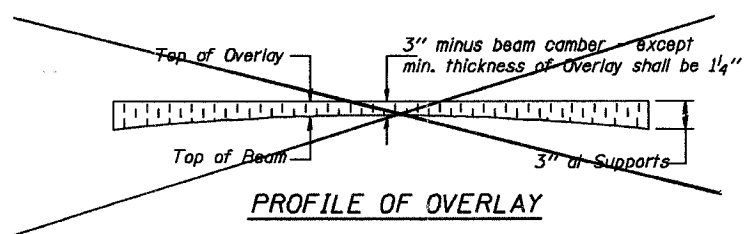
1/2" FABRIC BRG. PAD DETAILS



CROSS SECTION



PLAN
(D' = Designated Skew Angle)

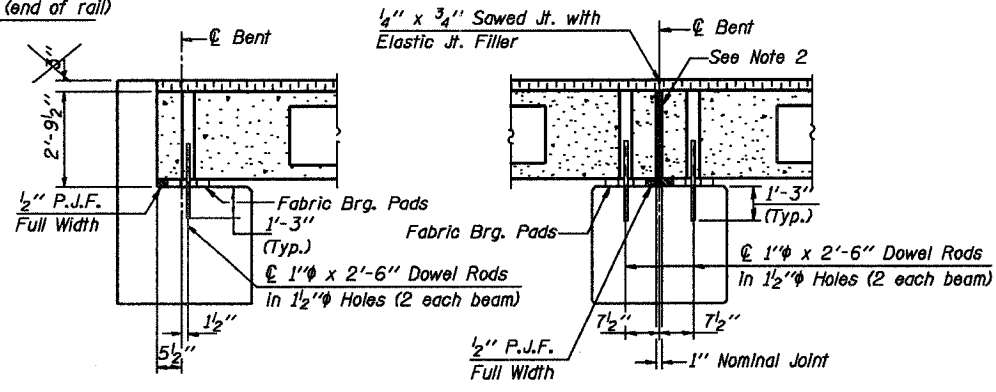


PROFILE OF OVERLAY

DIMENSIONS 'A' AND 'B'

'D'	5°	10°	15°	20°	25°	30°
A	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2 1/4"	2 5/8"
B	7 1/2"	7 5/8"	7 3/4"	8"	8 1/4"	8 5/8"

- NOTES**
- After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
 - Nominal 1" joint at centerline pier shall be filled with non-shrink grout.
 - Longitudinal keys shall be grouted.
 - The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar outside shall be filled with grout after transverse tie assembly is in place.



SECTION AT ABUTS.
(Along centerline Beams)

SECTION AT PIERS
(Along centerline Beams)

QUANTITIES FOR ONE SPAN

P.P. Conc. Dk. Bm. 33" Dp.	1680 Sq. Ft.
Steel Railing	140 Ft.
Waterproofing Membrane System	186.7 Sq. Yds.
Portland Cement Mortar	
Fairing Course	490 Ft.

Note: Quantity of overlay for one span = 21.3 Tons

P.P.C. DECK BEAM SUPERSTRUCTURE			
24' RDWY.	33" BMS.	70' SPAN	LEFT
STANDARD CS-2433-70L			

Illinois Department of Transportation

PASSED APRIL 4, 2005

Thomas J. [Signature]

Engineer of Bridge Design

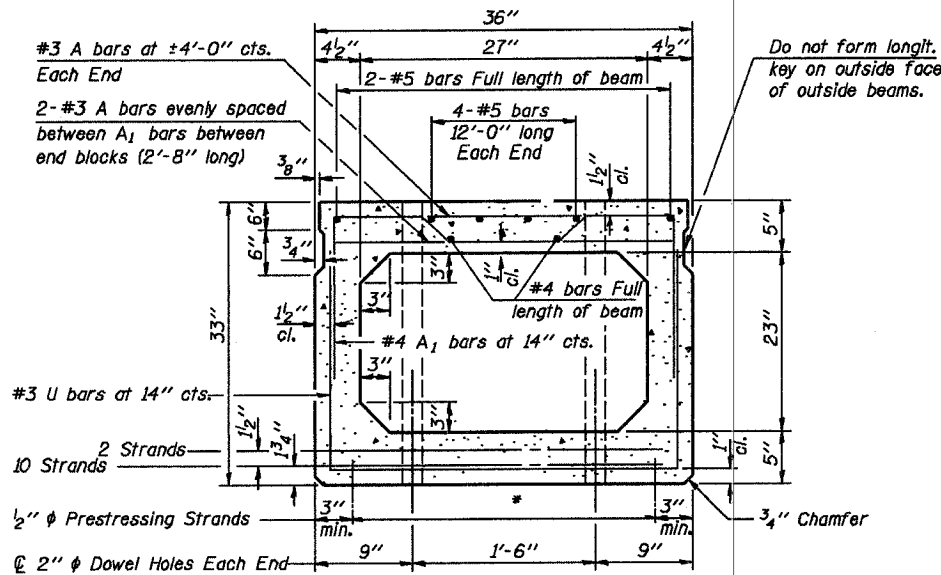
APPROVED APRIL 4, 2005

Ralph E. [Signature]

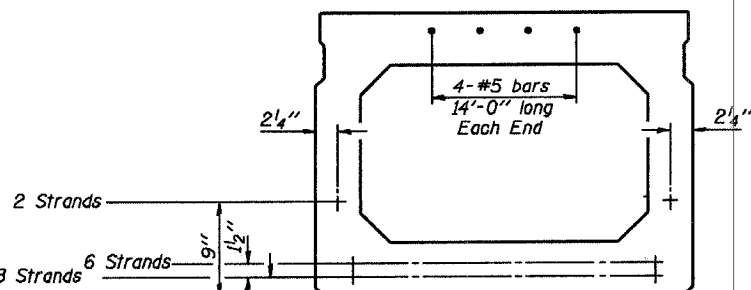
Engineer of Bridges and Structures

ISSUED 4-4-2005

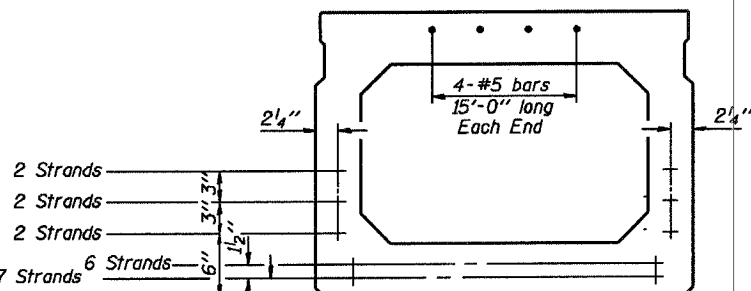
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 299	05-01122-00-BR	FAYETTE	11	6
FED. ROAD DIST. NO.	ILLINOIS PROJECT	CONTRACT NO. 95465		



CROSS SECTION
(60' SPAN)

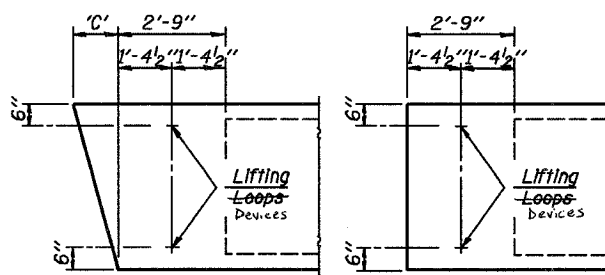


CROSS SECTION
(70' SPAN)



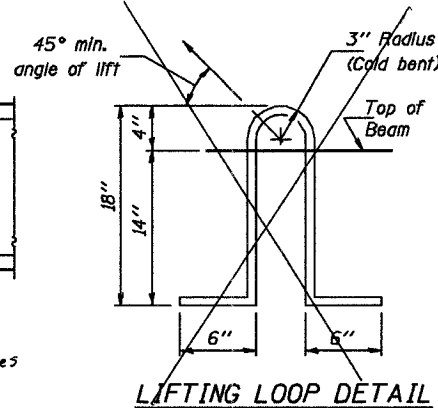
CROSS SECTION
(75' SPAN)

NOTE:
The std. reinf. and dimensions shown on the 60' span cross section is typical for all spans, except as shown.



END BLOCK DETAILS

Each beam shall have four Lifting Loop Devices two at each end of beam cast in locations shown above. Loops shall be burned off after beams have been erected.



LIFTING LOOP DETAIL

Lifting loops shall be 3/4 inch 270 ksi strands, as shown. Alternate approved lifting devices are also acceptable. SEE SPECIAL PROVISIONS

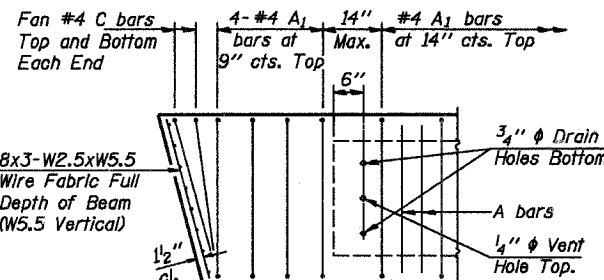
DIMENSION 'C'

Skew Angle 'D'	0°	5°	10°	15°	20°	25°	30°
Dimension 'C' (Inches)	0	3/8	6/8	9/8	13/8	16 3/4	20 3/4

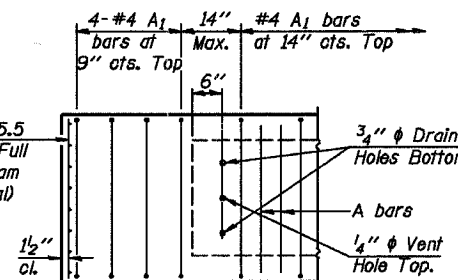
*** TRANSVERSE STRAND PLACEMENT GUIDELINES**

- Place strands symmetrically about centerline of beam.
- The minimum distance from center to center of strands in all directions shall be 2".
- The minimum clearance from strand to dowel hole shall be 1/2".
- The minimum clearance from strand to void shall be 1/2".

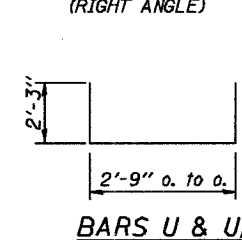
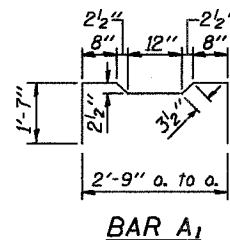
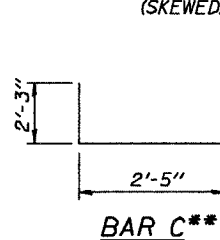
Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



END REINFORCEMENT
(SKEWED)



END REINFORCEMENT
(RIGHT ANGLE)

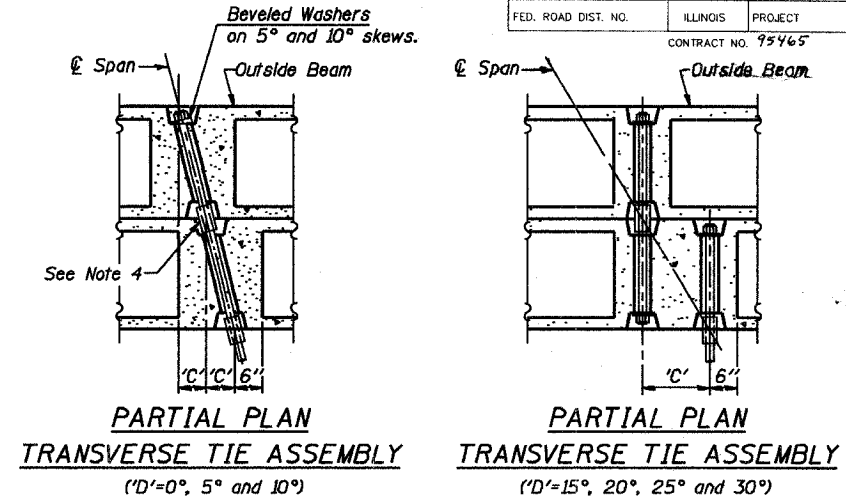


DESIGN STRESSES

$f'_c = 5,000$ p.s.i.
 $f'_{ci} = 4,000$ p.s.i.
 $f'_s = 270,000$ p.s.i. (1/2" ϕ Strand)
 $f_{sl} = 201,960$ p.s.i. (1/2" ϕ Strand)
 $f_y = 60,000$ p.s.i.

MIN. BAR LAP

#4 bars = 1'-4"
 #5 bars = 1'-8"

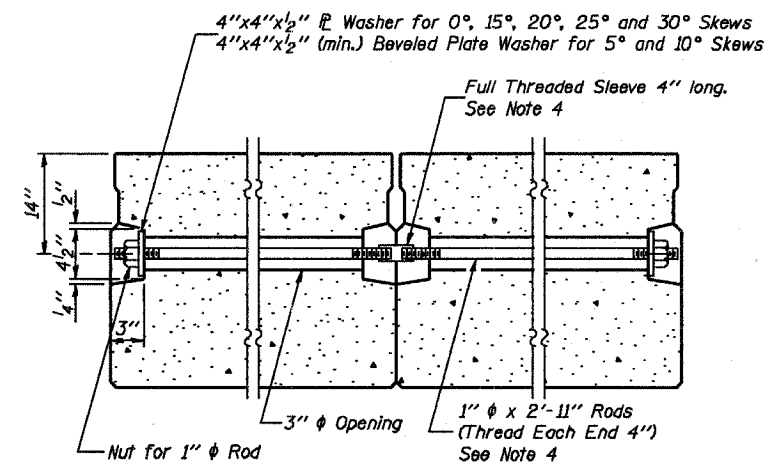


PARTIAL PLAN

TRANSVERSE TIE ASSEMBLY
(D'=0°, 5° and 10°)

PARTIAL PLAN

TRANSVERSE TIE ASSEMBLY
(D'=15°, 20°, 25° and 30°)



SECTION ALONG TRANSVERSE TIE ASSEMBLY

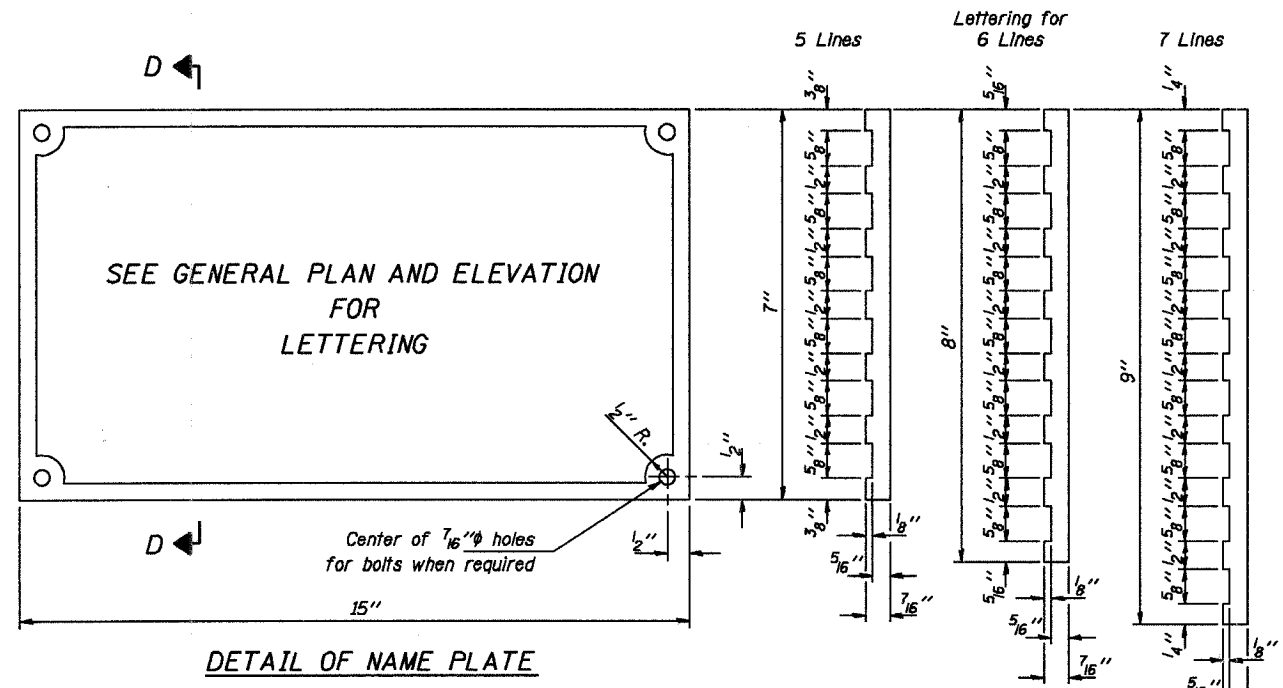
NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 square inches.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322, Grade 60.
- On 0°, 5° and 10° skews, alternate approved transverse tie rods of increased segmental length are acceptable.
- Roll Post anchor devices shall be cast into outside beam as elsewhere specified.
- When a Waterproofing Membrane System is specified, the top surface of the beams shall be screeded with a straightedge and finished with a hand float. The finished surface shall be free of depressions or high spots with sharp corners and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
- Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

Illinois Department of Transportation
 PASSED APRIL 4, 2005
 Theresia Roman-Viki
 Engineer of Bridge Design
 APPROVED APRIL 4, 2005
 Ralph E. Anderson
 Engineer of Bridges and Structures

P.P.C. DECK BEAM DETAILS
 24' ROADWAY | 33" x 36" BEAMS
 STANDARD CB-2433-36

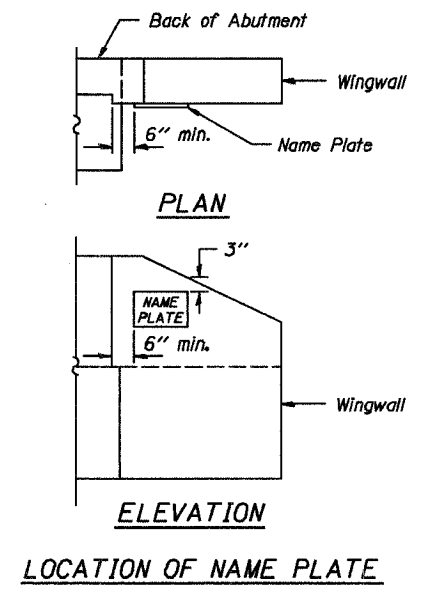
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 299	05-01122-00-BR	FAYETTE	11	9
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
CONTRACT NO. 95465				



DETAIL OF NAME PLATE

Material: Best quality brass or bronze.
 Border & Lettering: Raised $\frac{1}{8}$ inch. Square cut and not tapered. Top surface polished.
 Fastenings: Four lugs at least three inches long, cast on back of plate.

SECTIONS D-D



Illinois Department of Transportation

PASSED APRIL 4, 2005
Thomas S. Ramagala
 Engineer of Bridge Design

APPROVED APRIL 4, 2005
Ralph E. Anderson
 Engineer of Bridges and Structures

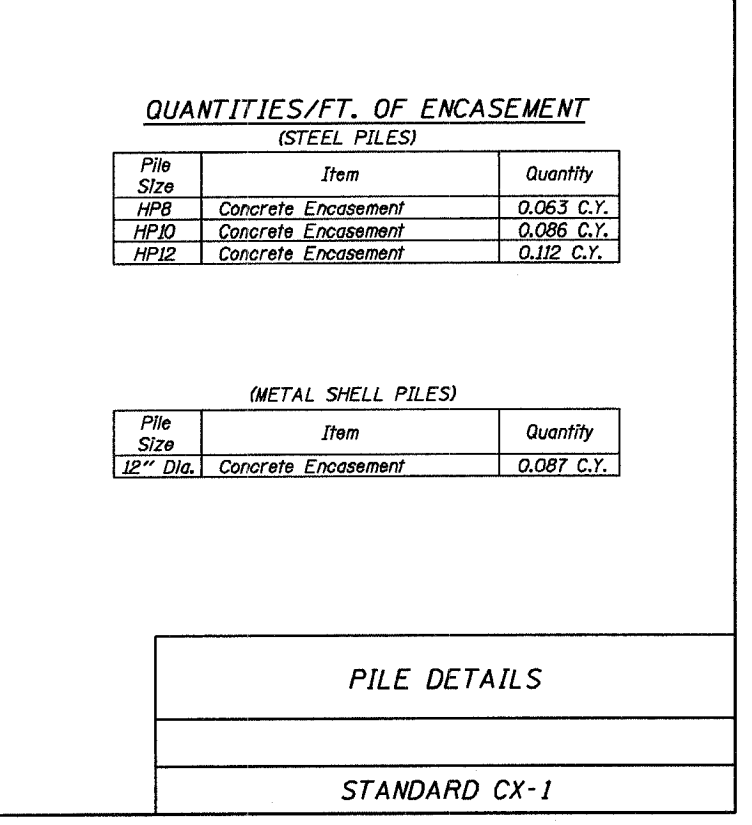
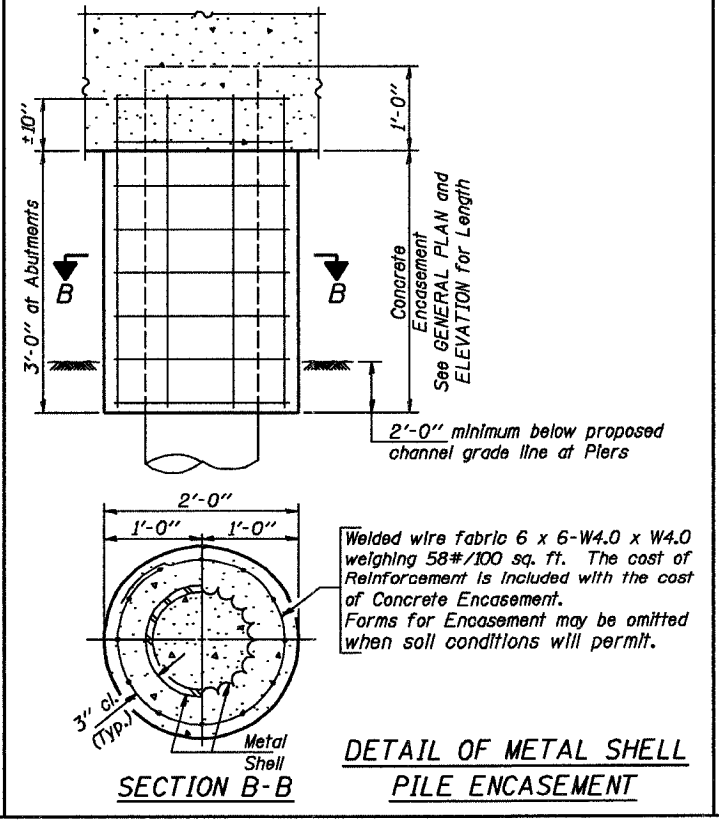
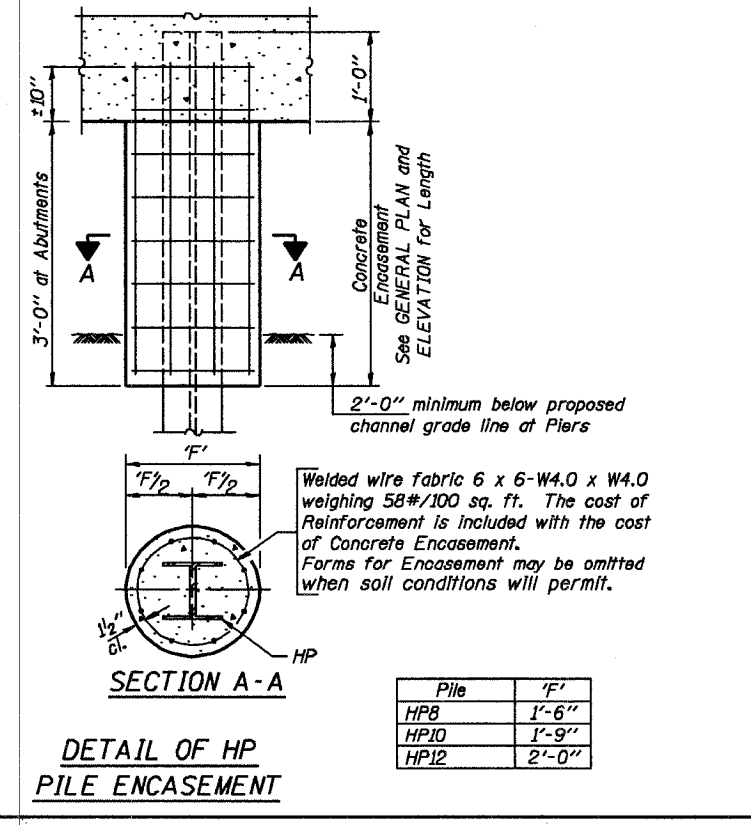
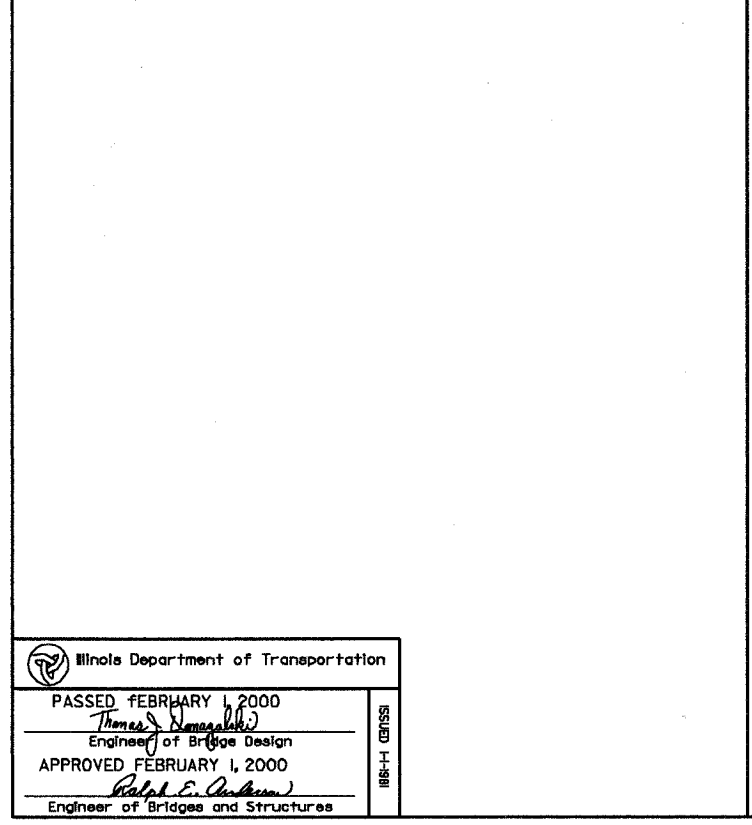
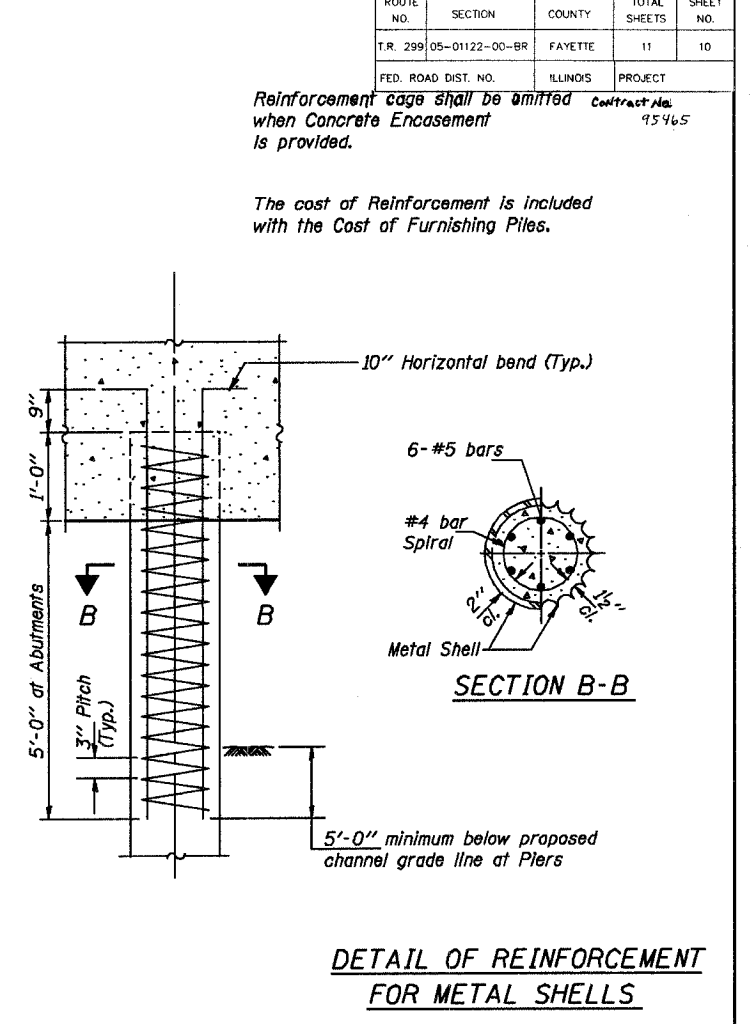
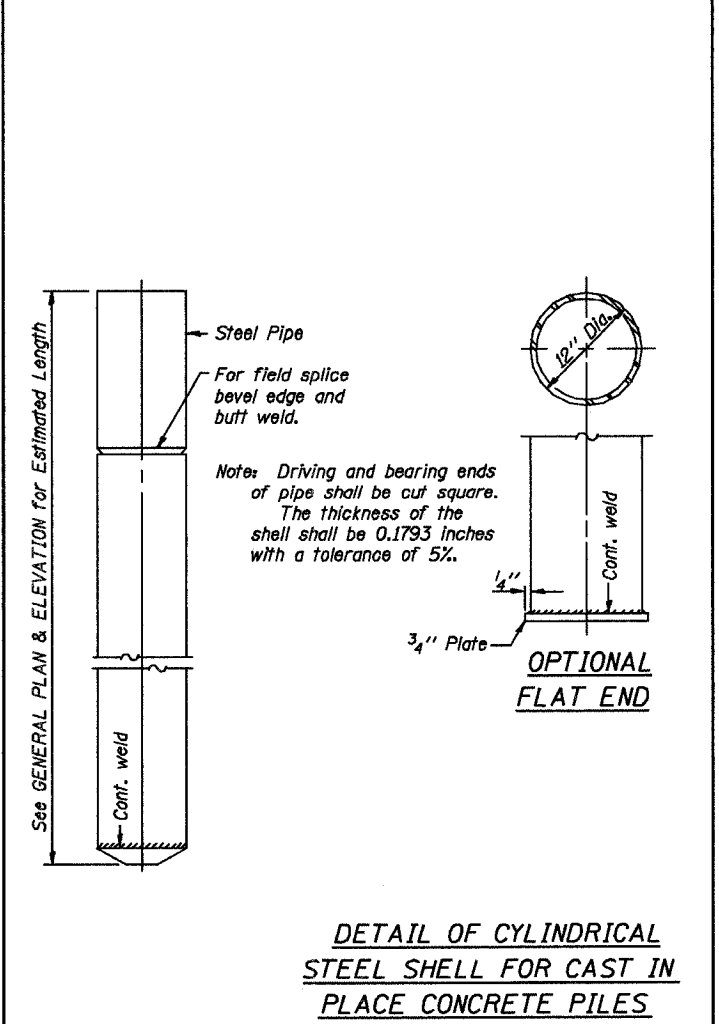
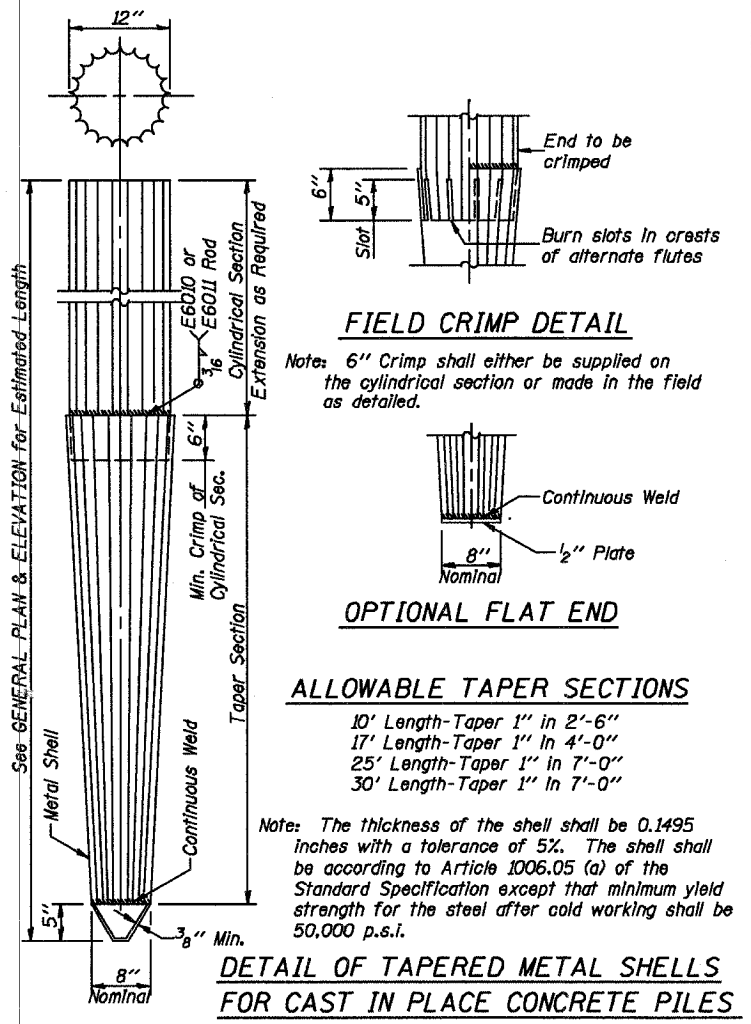
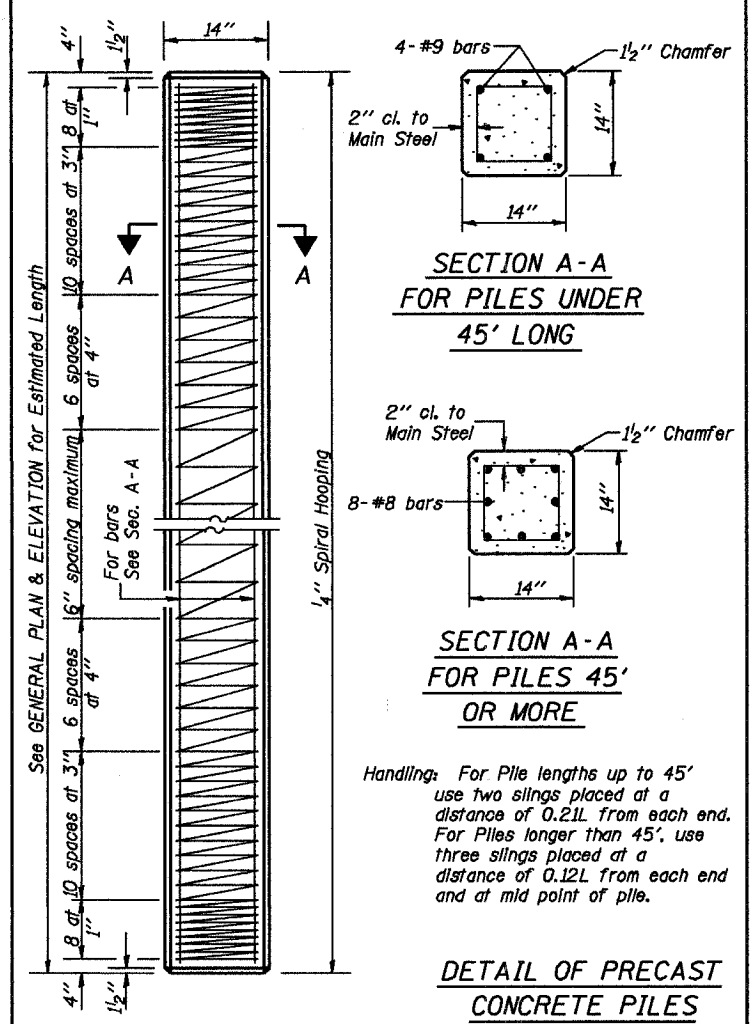
ISSUED 7-1-885

NAME PLATE
STANDARD CN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 299	05-01122-00-BR	FAYETTE	11	10
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

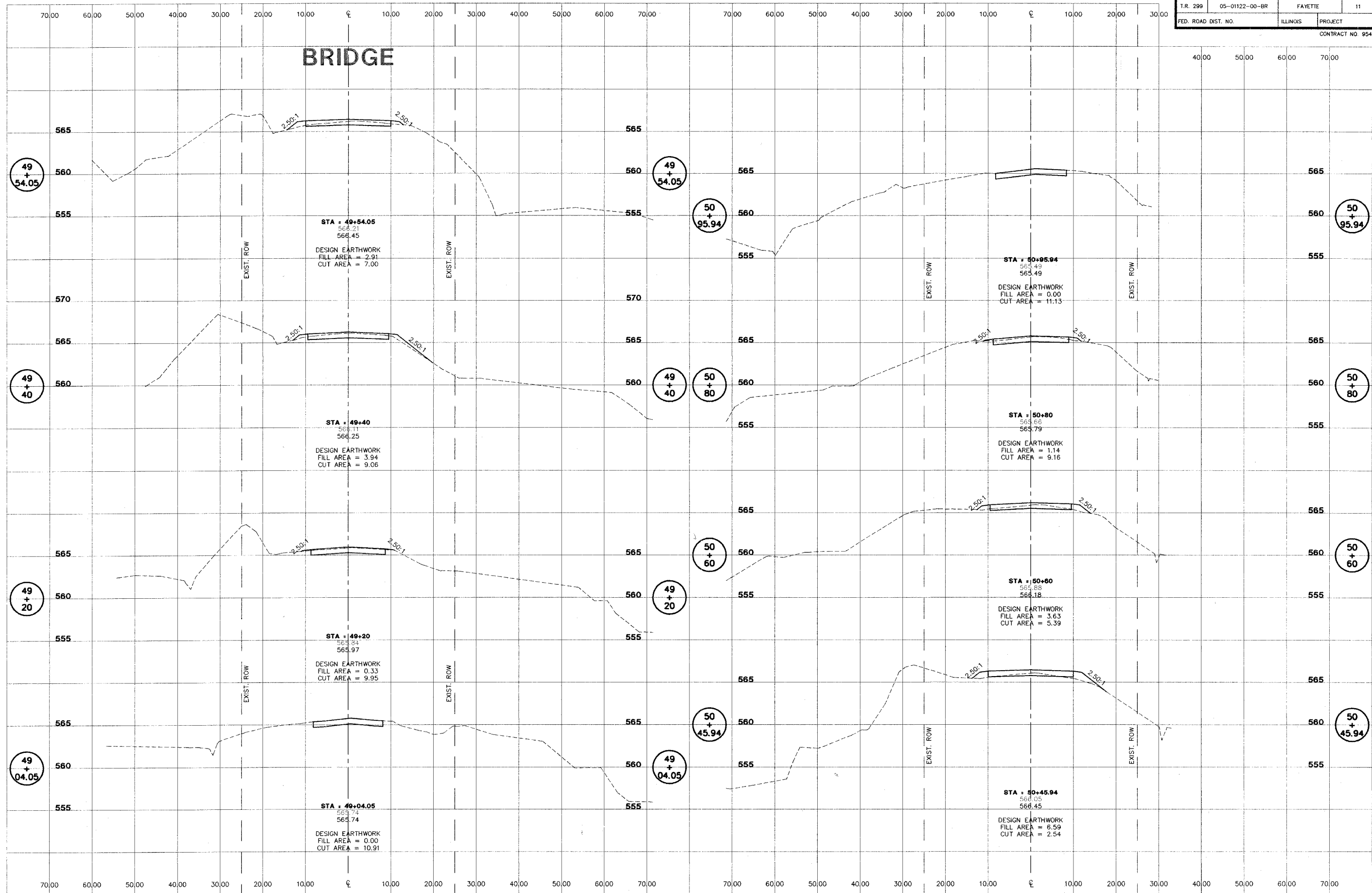
Reinforcement cage shall be omitted when Concrete Encasement is provided. Contract No. 95465

The cost of Reinforcement is included with the Cost of Furnishing Piles.



Illinois Department of Transportation
PASSED FEBRUARY 1, 2000
Engineer of Bridge Design
APPROVED FEBRUARY 1, 2000
Engineer of Bridges and Structures

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 299	05-01122-00-BR	FAYETTE	11	11
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	
CONTRACT NO. 95465				



BRIDGE

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STS CONSULTANTS 2524 South Broadway Salem, Illinois 62881 Ph (618) 548-3500 Fax (618) 548-3246 IL Design Firm Reg. No. 184-001518	TR 299 SECTION 05-01122-00-BR AVENA ROAD DISTRICT FAYETTE COUNTY, ILLINOIS	CROSS SECTIONS STA. 49+04.05 TO STA. 50+95.94	SURVEY JAS DESIGN MRQ DRAWN BLT/DJC	CHECKED APPROVED	DATE 01/24/06 REVISED JOB NO. 30387